

WHAT IS CLAIMED IS:

1. A data conversion apparatus comprising:

a temporary storage means for temporarily holding coded data of inputted video signal data;

a time stamp reading means for reading an input time stamp which is time information of the coded data, from the coded data stored in the temporary storage means;

a time stamp conversion means for converting the input time stamp of the coded data into a time stamp based on a fixed frame rate to be employed when outputting the coded data, said fixed frame rate being inputted from the outside as initial information; and

a fixed frame rate conversion means for converting the coded data to which the time stamp based on the fixed frame rate is added, into coded data at the fixed frame rate.

2. The data conversion apparatus of Claim 1, wherein said fixed frame rate conversion means comprises:

a non-updation frame formation means for forming coded data having information indicating non-updation, and adding an arbitrary value as the input time stamp to the coded data which means non-updation; and

a processing means for determining an output time stamp of the coded data outputted from the fixed frame rate conversion means, comparing the output time stamp with the time stamp based

on the fixed frame rate, and performing control for selecting one of the temporary storage means and the non-updation frame formation means, on the basis of the result of the comparison; and

said processing means performs a control so as to output the output time stamp and the coded data stored in the temporary storage means, when the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means non-updation and is outputted from the non-updation frame formation means, when the output time stamp is smaller than the time stamp based on the fixed frame rate.

3. The data conversion apparatus of Claim 1, wherein said fixed frame rate conversion means comprises:

a size 0 frame formation means for forming coded data which means that its size is 0, and adding an arbitrary value as the input time stamp to the coded data which means that its size is 0; and

a processing means for determining an output time stamp of the coded data outputted from the fixed frame rate conversion means, comparing the output time stamp with the time stamp based on the fixed frame rate, and performing control for selecting one of the temporary storage means and the size 0 frame formation means, on the basis of the result of the comparison; and

said processing means performs a control so as to output the output time stamp, and the coded data stored in the temporary storage means, when the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means that its size is 0 and is outputted from the size 0 frame formation means, when the output time stamp is smaller than the time stamp based on the fixed frame rate.

4. The data conversion apparatus of Claim 2, wherein

said processing means performs a control so as to output the output time stamp and the coded data stored in the temporary storage means, when a value obtained by adding an arbitrary value to the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means non-updation and is outputted from the non-updation frame formation means, when the value obtained by adding the arbitrary value to the output time stamp is smaller than the time stamp based on the fixed frame rate.

5. The data conversion apparatus of Claim 3, wherein

said processing means performs a control so as to output the output time stamp, and the coded data stored in the temporary storage means, when a value obtained by adding an arbitrary value

to the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means that its size is 0 and is outputted from the size 0 frame formation means, when the value obtained by adding the arbitrary value to the output time stamp is smaller than the time stamp based on the fixed frame rate.

6. The data conversion apparatus of Claim 2, wherein said fixed frame rate conversion means further includes a coded data time stamp continuation means for rewriting the input time stamp of the coded data outputted from the temporary storage means, and the input time stamp of the coded data which means non-updation and is outputted from the non-updation frame formation means, so as to make these input time stamps continuous, on the basis of the output time stamp.

7. The data conversion apparatus of Claim 3, wherein said fixed frame rate conversion means further includes a coded data time stamp continuation means for rewriting the input time stamp of the coded data outputted from the temporary storage means, and the input time stamp of the coded data which means that its size is 0 and is outputted from the size 0 frame formation means, so as to make these input time stamps continuous, on the basis of the output time stamp.

8. A data coding apparatus which captures inputted video signal data, judges whether the video signal data is to be coded or not on the basis of an input time stamp which is time information of the video signal data, and compressively encodes the video signal data by a coding means to obtain coded data at a variable frame rate, on the basis of the result of the judgement, said apparatus including:

a non-updation frame formation means for forming coded data having information which means non-updation, adding an arbitrary value as the input time stamp to the coded data which means non-updation, and determining a time stamp based on a fixed frame rate at the time of output;

wherein, when the result of the judgement is that the video signal data is not to be encoded, the coded data meaning non-updation and the time stamp based on the fixed frame rate are outputted from the non-updation frame formation means.

9. A data coding apparatus which captures inputted video signal data, judges whether the video signal data is to be coded or not on the basis of an input time stamp which is time information of the video signal data, and compressively encodes the video signal data by a coding means to obtain coded data at a variable frame rate, on the basis of the result of the judgement, said apparatus including:

a size 0 frame formation means for forming coded data which means that its size is 0, adding an arbitrary value as the input time stamp to the coded data which means that its size is 0, and determining a time stamp based on a fixed frame rate at the time of output;

wherein, when the result of the judgement is that the video signal data is not to be encoded, the coded data meaning that the size is 0 and the time stamp based on the fixed frame rate are outputted from the size 0 frame formation means.

10. A data recording apparatus comprising an RTP reception means for receiving transmitted RTP packets, an RTP reception buffer for temporarily holding the received RTP packets, and an RTP decoding means for restoring the RTP packets, which are stored in the RTP reception buffer and have the same RTP time stamp, to coded data; converting the coded data into a standard file format; and recording the file on a recording medium, said apparatus comprising:

a time stamp conversion means for obtaining the RTP time stamp from the RTP reception buffer, and converting the RTP time stamp into a time stamp based on a fixed frame rate to be employed when outputting the coded data, said fixed frame rate being supplied from the outside as initial information; and

a fixed frame rate conversion means for converting the coded data to which the time stamp based on the fixed frame rate is

added, into coded data of the fixed frame rate;

wherein the coded data of the fixed frame rate, which is outputted from the fixed frame rate conversion means, is converted into a standard file format to be recorded on the recording medium.

11. The data recording apparatus of Claim 10, wherein said fixed frame rate conversion means comprises:

a non-updation frame formation means for forming coded data having information which means non-updation, and adding an arbitrary value as the input time stamp to the coded data which means non-updation;

a temporary storage means for temporarily holding the coded data from the RTP decoding means; and

a processing means for determining an output time stamp of the coded data outputted from the fixed frame rate conversion means, comparing the output time stamp with the time stamp based on the fixed frame rate, and performing control for selecting one of the temporary storage means and the non-updation frame formation means on the basis of the result of the comparison; and

said processing means performs a control so as to output the output time stamp and the coded data stored in the temporary storage means, when the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp,

and the coded data which means non-updation and is outputted from the non-updation frame formation means, when the output time stamp is smaller than the time stamp based on the fixed frame rate.

12. The data recording apparatus of Claim 10, wherein said fixed frame rate conversion means comprises:

a size 0 frame formation means for forming coded data which means that its size is 0, and adding an arbitrary value as the input time stamp to the coded data which means that its size is 0;

a temporary storage means for temporarily holding the coded data from the RTP decoding means; and

a processing means for determining an output time stamp of the coded data outputted from the fixed frame rate conversion means, comparing the output time stamp with the time stamp based on the fixed frame rate, and performing control for selecting one of the temporary storage means and the size 0 frame formation means on the basis of the result of the comparison; and

said processing means performs a control so that the output time stamp and the coded data stored in the temporary storage means are outputted when the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so that the output time stamp and the coded data which means that its size is 0 and is outputted from

the size 0 frame formation means are outputted when the output time stamp is smaller than the time stamp based on the fixed frame rate.

13. The data recording apparatus of Claim 11, wherein

said processing means performs a control so as to output the output time stamp and the coded data stored in the temporary storage means, when a value obtained by adding an arbitrary value to the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means non-updation and is outputted from the non-updation frame formation means, when the value obtained by adding the arbitrary value to the output time stamp is smaller than the time stamp based on the fixed frame rate.

14. The data recording apparatus of Claim 12, wherein

said processing means performs a control so as to output the output time stamp, and the coded data stored in the temporary storage means, when a value obtained by adding an arbitrary value to the output time stamp is equal to or larger than the time stamp based on the fixed frame rate, and

performs a control so as to output the output time stamp, and the coded data which means that its size is 0 and is outputted from the size 0 frame formation means, when the value obtained by

adding the arbitrary value to the output time stamp is smaller than the time stamp based on the fixed frame rate.

15. The data recording apparatus of Claim 11, wherein said fixed frame rate conversion means further includes a coded data time stamp continuation means for rewriting the input time stamp of the coded data outputted from the temporary storage means, and the input time stamp of the coded data which means non-updation and is outputted from the non-updation frame formation means, so as to make these input time stamps continuous, on the basis of the output time stamp.

16. The data recording apparatus of Claim 12, wherein said fixed frame rate conversion means further includes a coded data time stamp continuation means for rewriting the input time stamp of the coded data outputted from the temporary storage means, and the input time stamp of the coded data which means that its size is 0 and is outputted from the size 0 frame formation means, so as to make these input time stamps continuous, on the basis of the output time stamp.